ESCAMBIA OPERATING COMPANY, LLC
GALLAGHER 16-3 NO. 1 OIL & GAS PRODUCTION WELL
FACILITY NO.: 502-0042
FLOMATON, ESCAMBIA COUNTY, AL

# STATEMENT OF BASIS

## PROJECT DESCRIPTION

The Department received a permit application from Escambia Operating Company, LLC (EOC) for its Gallagher 16-3 No.1 Oil and Gas Production Well (Gallagher Well) located off Lowery-Landing Road in Flomaton, Escambia County, AL. The facility is requesting that their status as a synthetic minor operating source be modified to that of a major source operating source as a result of an increase in crude oil production at the well site. The facility was originally designed to handle a capacity of 2,000 barrels per day (bbls/d) of crude oil; however, over the years there was a decline in production due to mechanical problems with the well-bore. In December 2008, EOC performed a well work-over and the company now anticipates an increase in crude oil production to 110 bbls/d, an increase in salt-water production to 800 bbls/d, and an increase in process/natural gas vapors (resulting from crude oil/salt-water separation) to 213.69 thousand cubic feet per day (mscf/d). Produced sour gas was originally transported via pipeline to the company's Flomaton/Fanny Church Plant for processing. However, the company now proposes sending the gas to the process flare for combustion.

Escambia Operating Company, LLC was issued SMOP No. 502-0042-X002 on September 6, 2006 for the Gallagher Well located in Flomaton, AL. The initial Title V permit application was received on January 4, 2010. Additional information was requested on January 14, 2010 to address concerns regarding applicability to PSD regulations. A complete permit application for the initial Title V was received at the Department on June 9, 2010. The proposed MSOP will expire five years from the date of issuance.

## PROCESS DESCRIPTION

Crude oil enters the Gallagher Well from various other producing wells within the oil field. The crude oil is then directed to a heater treater which is not fired. The heater treater uses gravity to separate the well stream into an oil stream, sour gas stream (containing approximately 3.0 mole % hydrogen sulfide ($H_2S$), and a saltwater stream. The saltwater stream is sent to two storage tanks located onsite and is pumped to the Gallagher injection well for disposal. The sour gas stream is sent through a flare scrubber to remove any liquids from the gas and is then sent through a flow meter to measure the volume of gas before being sent to the flare for combustion. A portion of the crude oil stream is circulated back through the well bore to power a jet pump fluid recovery system to help the well flow. The remaining crude oil is sent to three onsite storage tanks and eventually trucked off-site to sales. The vapors from the storage tanks are under a closed vent system (low pressure vent line) and are also directed to the flare for combustion.

## FACILITY HISTORY

CXY Energy, Inc was issued an air permit for the Gallagher Well on October 11, 1989. When the Gallaher Well initially began operating in 1989, the facility flared all of the produced gas. However, on October 20, 1991, a pipeline was constructed to route sour gas vapors from the Gallagher and Weaver wells to Exxon's (now operated by Escambia Operating Company) Flomaton Plant in Atmore, Escambia County, AL and to reduce sulfur dioxide ($SO_2$) emissions from the well. On November 14, 1995, CXY Energy requested that the facility become a synthetic minor source and was issued SMOP No.: 502-0042-X002 on February 1, 1996.

Since beginning operation, the Gallagher Well has been acquired by De Soto Oil and Gas, Inc. on April 23, 1997, by Vintage Petroleum Inc. on June 27, 2005, and by Escambia Operating Company on June 1, 2006.

## EMISSIONS

The majority of the emissions from the Gallagher Well will result from the combustion of the 213.69 mscf/day of sour gas in the flare. As stated above, the facility has now elected to burn the gas rather than send it down the pipeline to the Flomaton/Fanny Church Plant for processing. The flare emissions will consist primarily of sulfur dioxide ($SO_2$) emissions that would result from converting most of the $H_2S$ in the gas to $SO_2$. The potential emissions are shown in Table 1.

| | **Potential Emissions (Ton/yr)** | | | | | |
|---|---|---|---|---|---|---|
| | **PM 2.5/10** | **$SO_2$** | **$NO_X$** | **CO** | **VOC** | **Total HAPs** |
| **FACILITY WIDE** | 0.63 | 193.59 | 7.36 | 19.73 | 21.71 | 2.10 |

*Table 1: Potential Uncontrolled Emissions from the Gallagher Well*

# FACILITY-WIDE EMISSIONS

The Gallagher Well is equipped with the following emission sources:

| Emission Point | Description | Pollutant | Emission Limit | Regulations |
|---|---|---|---|---|
| **Individual Sources:** | | | | |
| (FLARE) Process Flare<br>Truck Loading Rack<br>Storage Tanks<br>(2) 16,800 Gallon Saltwater Storage Tanks<br>(3) 16,800 Gallon Crude Oil Storage Tanks<br>(1) 21,000 Gallon Crude Oil Storage Tanks<br>(1) 8,820 Gallon Fresh Water Storage Tank<br>(3) 300 Gallon Methanol Storage Tanks | | | | |

The following sections discuss state and/or federal regulations which the Gallagher Well may be subject to:

## STATE REGULATIONS

**Applicability:**

- ADEM Admin. Code R. 335-3-4-.01, "*Visible Emissions"* for Control of Particulate Emissions is applicable to stationary sources. All emission sources at the Gallagher Well would be subject to this regulation.

**Emission Standards:**

- All emission sources would be required to meet the 20% and 40% opacity requirement as specified in ADEM Admin. Code R. 335-3-4-.01(1) (a) and (b).

**Applicability:**

- ADEM Admin. Code R. 335-3-5-.03(1), "*Petroleum Production*" applies to the control of sulfur compound emissions from each petroleum production facility that handles gas or refinery gas that contains more than 0.10 grains of hydrogen sulfide ($H_2S$) per standard cubic foot (scf) (approximately 160 ppmv of $H_2S$). The Gallagher Well is expected to handle sour gas that contains 30,000 ppmv of $H_2S$; therefore, the facility is subject to the applicable requirements of this regulation. The facility uses the process flare to comply with this regulation.

**Emission Standards:**

- In order to meet the applicability requirements of ADEM Admin. Code R. 335-3-5-.03(1), all process gas containing greater than the 0.10 grains of $H_2S$/scf shall be burned to the extent that the ground level concentrations of hydrogen sulfide are less than twenty (20) parts per billion beyond plant property limits, averaged over a thirty (30) minute period

## FACILITY-WIDE EMISSIONS

(335-3-5-.03(2)). Except when being depressurized and/or emptied, venting to the atmosphere shall not exceed 15 continuous minutes.

- $SO_2$ emissions from a facility designed to dispose of or process natural gas or refinery gas containing more than 0.10 grain of $H_2S$/scf in a Category II County depends on the available sulfur (LTons/day) being processed (335-3-5-.03(3)). The Gallagher Well which is located in Escambia County, a Category II County, will dispose of sour natural gas by burning it in the process flare; therefore, the $SO_2$ emissions limits for Category II Counties found in ADEM Admin. Code R. 335-3-5-.03(3) would be applicable to this facility. The available sulfur sent to the flare is expected to be approximately 0.254 LTons/day, therefore, the permitted $SO_2$ emissions would be unlimited since the expected available sulfur would be less than 10 LTons/day.

- ADEM Admin. Code R. 335-3-5-.03(4) would not be applicable to the Gallagher Well because it would not process natural gas and it does not have a capacity greater than 50 million standard cubic feet of sour gas per day (50 MMscf/day). The well has a design capacity of 213.69 Mscf/day of produced sour gas; therefore, it would not be subject to the applicable requirements of this regulation.

**Applicability:**

- ADEM 335-3-14-.04, "*Prevention of Significant Deterioration (PSD) Permitting*" applies to the construction of any new major stationary source or any project at an existing major stationary source. The Gallagher Well would be considered a new major stationary source. Because the facility does not include one of the 28 source categories found in ADEM 335-3-14-.04(2)(a)(1), the PSD threshold for this type of stationary source would be 250 tons per year (TPY) of any regulated NSR pollutant (ADEM 335-3-14-.04(2)(a)(1)(i)). The facility-wide emissions would not be expected to exceed more than 250 TPY of regulated pollutants as shown in the emissions section. However, the allowable $SO_2$ emissions from this well, as specified in ADEM Admin. Code R. 335-3-5-.03(3) would be unlimited. In order to maintain the $SO_2$ emissions below the PSD threshold of 250 TPY, an anti-PSD limit of 56 lb/hr (or 245 TPY) has been requested by the facility.

**Applicability:**

- ADEM Admin. Code R. 335-3-16-.03, "*Major Source Operating Permits".* The facility would be a major source for criteria pollutants since the emissions from these pollutants are expected to exceed 100 TPY. However, the facility would not be major for hazardous air pollutants (HAPs) since the potential emissions are not expected to exceed 10 TPY for a single HAP or 25 TPY for a combination of HAPs.

# FACILITY-WIDE EMISSIONS

## FEDERAL REGULATIONS

### New Source Performance Standards (NSPS)

**Applicability:**

- The Gallagher Well would not be subject to any regulations established under 40 CFR Part 60.

### National Emission Standards for Hazardous Air Pollutants (NESHAP)

**Applicability:**

- 40 CFR 63 Subpart HH, *"National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities"*, would be applicable to the Gallagher Well. This subpart applies to facilities that are a major source or area source of HAPs (40 CFR §63.760(a)(1)) and either process, upgrade, or store hydrocarbon liquids prior to the point of custody transfer (40 CFR §63.760(a)(2)) or process, upgrade, or store natural gas prior to the point at which natural gas enters the natural gas transmission and storage source category or is delivered to a final end user (40 CFR §63.760(a)(3)).

  A major source of HAPs requires a potential to emit 10 TPY of one HAP or 25 TPY of a combination of HAPs (40 CFR §63.2). As shown in Table 1, the total HAPs from the facility are not expected to exceed the major source threshold for a combination of HAPs. The expected uncontrolled total HAPs emissions are 2.61 TPY; therefore, the Gallagher Well would not be considered a major source of HAPs emissions. As a result, the facility would be considered an area source of HAPs under this subpart. An area source of HAPs is any source that is not a major source of HAPs. In order for the Gallagher Well to have an affected source under this subpart for area sources, it would have to be equipped with a tri-ethylene glycol (TEG) dehydration unit (40 CFR §63.760(b)(2)). The Gallagher Well is currently not equipped with a TEG unit; therefore, the well would be subject to this subpart but not have any applicable requirements under this subpart.

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# PROCESS FLARE EMISSIONS

As stated in the emissions section, the majority of emissions from the Gallagher Well will result from flaring sour gas. The Gallagher Well is equipped with one flare which burns the sour natural gas that is separated from the well stream and the gas vapors collected by the closed vent system on the storage tanks.

| Emission Point | Description | Pollutant | Emission Limit | Regulations |
|---|---|---|---|---|
| **Individual Sources:** | | | | |
| (FLARE) Process Flare | | Opacity | <=20 %<br><40% | Rule 335-3-4-.01(1)<br>Rule 335-3-4-.01(2) |
| | | $H_2S$ | Burn gas with 0.10 grains of $H_2S$/scf | Rule 335-3-5-.03(1) |
| | | $H_2S$ | 20 ppbv offsite | Rule 335-3-5-.03(2) |
| | | $SO_2$ | 56 lb/hr | Anti-PSD Limit<br>Rule 335-3-14-.04(2)(a)(1)(i)<br>Rule 335-3-5-.03(3) |

The following sections discuss state and/or federal regulations which the process flare may be subject to:

## STATE REGULATIONS

**Applicability:**

- ADEM Admin. Code R. 335-3-4-.01, "*Visible Emissions"* for Control of Particulate Emissions is applicable to stationary sources. The facility's process flare would be subject to the requirements under this subpart. Since sour natural gas would be burned in the flare, opacity monitoring shall be conducted on the flare any time that a process gas stream can be sent to it.

**Emission Standards:**

- The flare would be required to meet the 20% and 40% opacity requirement as specified in ADEM Admin. Code R. 335-3-4-.01(1) (a) and (b).

**Compliance and Performance Test Methods and Procedures:**

- Compliance with the visible emission standards shall be met by conducting a daily visual inspection of the flare for visible emissions. Provided that visible emissions or observed in excess of the opacity standards, a visible emission observation (veo) shall be conducted on the process flare according to either EPA Test Method 9 or Method 22 found in 40 CFR Part 60.

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# PROCESS FLARE EMISSIONS

**Emission Monitoring:**

- Opacity monitoring for the process flare shall be conducted anytime process gas is being sent to the flare and when plant personnel is present at the plant to conduct monitoring.

**Recordkeeping and Reporting Requirements:**

- Record of the daily visual inspection of the flare for visible emissions (date, time, duration, and results of each inspection)

- Record of each visible emission observation (date, time, person conducting observation, corrective actions, and veo report if EPA Method 9 used)

**Applicability:**

- ADEM Admin. Code R. 335-3-5-.03(1), "*Petroleum Production*" applies to the control of sulfur compound emissions from each petroleum production facility that handles gas or refinery gas that contains more than 0.10 grains of hydrogen sulfide ($H_2S$) per standard cubic foot (scf) (approximately 160 ppmv of $H_2S$). The facility flare is used to comply with this regulation.

**Emission Standards:**

- In order to meet the applicability requirements of ADEM Admin. Code R. 335-3-5-.03(1), all process gas containing greater than the 0.10 grains of $H_2S$/scf shall be burned to the extent that the ground level concentrations of hydrogen sulfide are less than twenty (20) parts per billion beyond plant property limits, averaged over a thirty (30) minute period (335-3-5-.03(2)). Except when being depressurized and/or emptied, venting to the atmosphere shall not exceed 15 continuous minutes.

    - $SO_2$ emissions from a facility designed to dispose of or process natural gas or refinery gas containing more than 0.10 grain of $H_2S$/scf in a Category II County depends on the available sulfur (LTons/day) being processed (335-3-5-.03(3)). The Gallagher Well, which is located in Escambia County a Category II County, will dispose of sour natural gas by burning it in the process flare; therefore, the $SO_2$ emissions limits for Category II Counties found in ADEM Admin. Code R. 335-3-5-.03(3) would be applicable to this facility. The available sulfur sent to the flare is expected to be less than 10 Ltons/day; therefore, the permitted $SO_2$ emissions would be unlimited. In order for the facility to not exceed the 250 TPY PSD threshold, an anti-PSD limit of 56 lb/hr (or 245 TPY) of $SO_2$ emissions has been requested.

- ADEM Admin. Code R. 335-3-5-.03(4) would not be applicable to the Gallagher Well because it is not expected to process natural gas in Escambia County that has a capacity greater than 50 million standard cubic feet of sour gas per day (50 MMscf/day).

## PROCESS FLARE EMISSIONS

The 213.6 Mscf/day of sour gas produced by the Gallagher Well would not be processed, it would be disposed of in the process flare; therefore, it would not be subject to the applicable requirements of this regulation.

**Compliance and Performance Test Methods and Procedures:**

- Compliance with the requirement to burn gas containing 0.10 grains of $H_2S$/scf would be demonstrated by capturing and routing sour gas vapors from the storage tanks and produced sour gas from the separator to the flare for combustion. Compliance with this regulation is also met by sampling and testing each process gas stream that can be sent to the process flare for its hydrogen sulfide content ($H_2S$ ppmv) no less than once each month.

- Compliance with the requirement to maintain the ground level concentrations of hydrogen sulfide at less than twenty (20) parts per billion beyond plant property limits averaged over a thirty (30) minute period shall be met by maintaining the $H_2S$ feedrate to the flare at less than 500 lb/hr.

**Emission Monitoring:**

- Emission monitoring shall be in the form of continuously monitoring the inlet volume of $H_2S$ in the gas being sent to the process flare and by calculating the monthly $SO_2$ emissions from the process flare.

**Recordkeeping and Reporting Requirements:**

- A record of the following shall be maintained: each deviation and corrective actions taken, each daily visual inspection of the flare, the results of each visible emission observation, volume of gas burned in the flare (Mscf/month), $H_2S$ content (mol %) of process stream sent to the process flare, flare stream $H_2S$ feed rate (Lbs/day and Lb/hr), flare $H_2S$ feed rate (Lbs/hr), stream heat input (MMBtu/month), process flare $SO_2$ emissions (Lbs/Month, Tons/Month, Tons/12 consecutive months), monthly average $SO_2$ emissions (lb/hr), and the number of hours the process flare operated during the month.

- A Periodic Monitoring Report (PMR) that identifies each incidence of a deviation from a permit term or condition for the process flare including those that occur during startups and shutdowns shall be prepared and submitted to the Department. The PMR report shall be submitted semi-annually on a calendar basis within 30 days of the end of the reporting period.

**Applicability:**

- ADEM 335-3-14-.04, "*Prevention of Significant Deterioration (PSD) Permitting*" applies to the construction of any new major stationary source or any project at an existing major stationary source. The Gallagher Plant would be considered a new major stationary source. Because the facility does not include one of the 26 source categories

## PROCESS FLARE EMISSIONS

found in ADEM 335-3-14-.04(2)(a)(1), the PSD threshold for this type of stationary source would be 250 tons per year (TPY) of any regulated NSR pollutant (ADEM 335-3-14-.04(2)(a)(1)(i)). An anti-PSD limit has been requested by the facility to maintain the $SO_2$ emissions below the PSD threshold; therefore, a PSD review would not be required for this project.

**Applicability:**

- ADEM Admin. Code R. 335-3-16-.03, "*Major Source Operating Permits".* The process flare will be located at a facility that will be subject to MSOP regulations; therefore, this unit shall be subject to this regulation.

### FEDERAL REGULATIONS

### New Source Performance Standards (NSPS)

**Applicability:**

- The process flare would not be subject to any regulations established under 40 CFR Part 60.

### National Emission Standards for Hazardous Air Pollutants (NESHAP)

**Applicability:**

- The process flare would not be subject to any regulations established under 40 CFR Part 63.

### 40 CFR 64, Compliance Assurance Monitoring (CAM)

**Applicability:**

- The process flare is subject to the requirements of this regulation because it meets all of the following criteria: has an emission limit or standard, uses a control device to achieve compliance with the emission limit or standard, and has pre-controlled emissions greater than 100 TPY for criteria pollutants, 10 TPY for a single hazardous air pollutant (HAP) or 25 TPY for a combination of HAPs (40 CFR §64.2(a)).

  The process flare is used as a control device to comply with the work practice requirement to burn process gas containing 0.10 grains of $H_2S$/scf. As defined in the CAM regulation, an emission limitation may be expressed in the form of a work practice, process parameter or other form of specific design (40 CFR §64.1). Also the pre-controlled sulfide dioxide ($SO_2$) emissions from the process flare are expected to exceed the 100 TPY major source threshold for criteria pollutants; therefore, this unit is subject to CAM regulations.

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# PROCESS FLARE EMISSIONS

**Emission Standards:**

- Burn all process gas containing greater than 0.10 grains of $H_2S$/scf in the process flare.

**Compliance and Performance Test Methods and Procedures:**

- Compliance with the requirement to burn each process gas stream containing 0.10 grains of $H_2S$/scf shall be demonstrated by maintaining the presence of a flame or spark at the flare tip at all times when a process gas stream may be sent to it. The facility flare would be equipped with an automatic ignition system. If the flare fails to ignite, the monitoring system shuts down the facility and sends a notification to Flomaton/Fanny Church Plant personnel.

**Emission Monitoring:**

- CAM is met by monitoring the process flare as required by equipping the flare tip with a continuous sparking flame igniter, with a continuous burning pilot light, or by conducting a daily visual observation. The Gallagher Well would be equipped with an automatic igniter system.

**Recordkeeping and Reporting Requirements:**

- A record of the time, date, and results of each incident when the flare igniter fails to ignite and there was not a spark or flame present at the flare tip shall be maintained along with any corrective actions.

- Provided that a flame igniter or pilot flame monitor is used to verify the presence of a spark or flame at the flare tip, records of the time, date and results of each calibration shall be maintained.

- A Excess Emissions/ CMS Performance Summary Report shall be submitted to the Department quarterly on a calendar basis within 30 days of the end of the reporting period. The report shall include each incident when there was not a spark or flame present at the flare tip when process gas could be sent to the flare.

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# STORAGE TANK EMISSIONS

The storage tanks located at the Gallagher Well are given in the following table. A closed vent system routes low pressure vent gas from the storage tanks to the flare for combustion.

| Emission Point | Description | Pollutant | Emission Limit | Regulations |
|---|---|---|---|---|
| **Sources:** | | | | |
| (Tank-01) 16,800 Gallon Saltwater Vertical Fixed Roof Tank (VFRT)<br>(Tank-02) 16,800 Gallon Saltwater VFRT<br>(Tank-03) 16,800 Gallon Crude Oil VFRT<br>(Tank-04) 16,800 Gallon Crude Oil VFRT<br>(Tank-05) 16,800 Gallon Crude Oil VFRT<br>(Tank-06) 21,000 Gallon Crude Oil VFRT<br>(Tank-07) 8,820 Gallon Fresh Water VFRT<br>(Tank-08) 300 Gallon Methanol Horizontal Fixed Roof Tank (HFRT)<br>(Tank-09) 300 Gallon Methanol HFRT<br>(Tank-10) 300 Gallon Methanol HFRT | | | | |

The following sections discuss state and/or federal regulations which the storage tanks may be subject to.

## FEDERAL REGULATIONS

### New Source Performance Standards (NSPS)

**Applicability:**

- 40 CFR 60 Subpart $K_B$, "*Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced after July 23, 1984,* would be not be applicable to the three 16,800 gallon crude oil storage tanks (Tanks 03, 04, and 05) located at the Gallagher Well. Construction permits for these storage tanks were issued in 1989, however, each of these storage vessels would not have a capacity greater than or equal to 75 cubic meters (19,812.9 gallons) that is used to store volatile organic liquids (40 CFR 60.110b(a)).

  The 21,000 gallon power oil storage tank (Tank-06) does have a capacity to store greater than 19,812.9 gallons of volatile organic liquids. However, since this tank stores petroleum or condensate prior to custody transfer and it has a design capacity less than or equal to 1,589.874 cubic meters (420,000 gallons), this subpart would not be applicable to this tank (40 CFR 60.11b (d)(4)). Therefore, none of the facility's storage vessels would be subject to the applicable requirements of this subpart.

Recommendations

I recommend that Escambia Operating Company, LLC be issued an initial Major Source Operating Permit No. 502-0042 for the Gallagher 16-3 No. 1 Oil and Gas Production Facility. The facility should be able to meet the applicable state and federal regulations associated with the proposed emission sources. The issuance of this permit will supersede the requirements of the facility's current Synthetic Minor Operating Permit No. 502-0042-X002.

_____ July 21, 2010

Harlotte M. Bolden-Wright
Industrial Minerals Section
Energy Branch
Air Division

Draft Date

**ATTACHMENT A**

**DRAFT PROVISOS**

Alabama Department of Environmental Management

# MAJOR SOURCE OPERATING PERMIT

| | |
|---|---|
| **PERMITTEE:** | ESCAMBIA OPERATING COMPANY, LLC |
| **FACILITY NAME:** | GALLAGHER 16-3 NO. 1 OIL & GAS PRODUCTION FACILITY |
| **FACILITY/PERMIT NO.:** | 502-0042 |
| **LOCATION:** | FLOMATON, ESCAMBIA COUNTY, ALABAMA |

*In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, as amended, Ala. Code 1975, §§22-28-1 to 22-28-23 (2006 Rplc. Vol. and 2007 Cum. Supp.) (the "AAPCA") and the Alabama Environmental Management Act, as amended, Ala. Code 1975, §§22-22A-1 to 22-22A-15, (2006 Rplc. Vol. and 2007 Cum. Supp.) and rules and regulations adopted thereunder, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.*

*Pursuant to the **Clean Air Act of 1990**, all conditions of this permit are federally enforceable by EPA, the Alabama Department of Environmental Management, and citizens in general. Those provisions which are not required under the **Clean Air Act of 1990** are considered to be state permit provisions and are not federally enforceable by EPA and citizens in general. Those provisions are contained in separate sections of this permit.*

**Issuance Date:** Draft July 23, 2010

**Expiration Date:**

Alabama Department of Environmental Management

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# General Permit Provisos

| Federally Enforceable Provisos | Regulations |
|---|---|
| **1. Transfer** | |
| This permit is not transferable, whether by operation of law or otherwise, either from one location to another, from one piece of equipment to another, or from one person to another, except as provided in Rule 335-3-16-.13(1)(a)5. | Rule 335-3-16-.02(6) |
| **2. Renewals** | |
| An application for permit renewal shall be submitted at least six (6) months, but not more than eighteen (18) months, before the date of expiration of this permit. | Rule 335-3-16-.12(2) |
| The source for which this permit is issued shall lose its right to operate upon the expiration of this permit unless a timely and complete renewal application has been submitted within the time constraints listed in the previous paragraph. | |
| **3. Severability Clause** | |
| The provisions of this permit are declared to be severable and if any section, paragraph, subparagraph, subdivision, clause, or phrase of this permit shall be adjudged to be invalid or unconstitutional by any court of competent jurisdiction, the judgment shall not affect, impair, or invalidate the remainder of this permit, but shall be confined in its operation to the section, paragraph, subparagraph, subdivision, clause, or phrase of this permit that shall be directly involved in the controversy in which such judgment shall have been rendered. | Rule 335-3-16-.05(e) |
| **4. Compliance** | |
| (a) The permittee shall comply with all conditions of ADEM Admin. Code 335-3. Noncompliance with this permit will constitute a violation of the Clean Air Act of 1990 and ADEM Admin. Code 335-3 and may result in an enforcement action; including but not limited to, permit termination, revocation and reissuance, or modification; or denial of a permit renewal application by the permittee. | Rule 335-3-16-.05(f) |
| (b) The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity. | Rule 335-3-16-.05(g) |

## General Permit Provisos

| Federally Enforceable Provisos | Regulations |
|---|---|
| **5. Termination for Cause** | |
| This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance will not stay any permit condition. | Rule 335-3-16-.05(h) |
| **6. Property Rights** | |
| The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege. | Rule 335-3-16-.05(i) |
| **7. Submission of Information** | |
| The permittee must submit to the Department, within 30 days or for such other reasonable time as the Department may set, any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. Upon receiving a specific request, the permittee shall also furnish to the Department copies of records required to be kept by this permit. | Rule 335-3-16-.05(j) |
| **8. Economic Incentives, Marketable Permits, and Emissions Trading** | |
| No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit. | Rule 335-3-16-.05(k) |
| **9. Certification of Truth, Accuracy, and Completeness:** | |
| Any application form, report, test data, monitoring data, or compliance certification submitted pursuant to this permit shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete. | Rule 335-3-16-.07(a) |
| **10. Inspection and Entry** | |
| Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized representatives of the Alabama Department of Environmental | Rule 335-3-16-.07(b) |

| Federally Enforceable Provisos | Regulations |
|---|---|
| Management and EPA to conduct the following:<br><br>(a) Enter upon the permittee's premises where a source is located or emissions-related activity is conducted, or where records must be kept pursuant to the conditions of this permit;<br><br>(b) Review and/or copy, at reasonable times, any records that must be kept pursuant to the conditions of this permit;<br><br>(c) Inspect, at reasonable times, this facility's equipment (including monitoring equipment and air pollution control equipment), practices, or operations regulated or required pursuant to this permit;<br><br>(d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or other applicable requirements. | |
| **11. <u>Compliance Provisions</u>**<br><br>(a) The permittee shall continue to comply with the applicable requirements with which the company has certified that it is already in compliance.<br><br>(b) The permittee shall comply in a timely manner with applicable requirements that become effective during the term of this permit. | Rule 335-3-16-.07(c) |
| **12. <u>Compliance Certification</u>**<br><br>On or before ????? a compliance certification shall be submitted annually.<br><br>(a) The compliance certification shall include the following:<br><br>(1) The identification of each term or condition of this permit that is the basis of the certification;<br><br>(2) The compliance status;<br><br>(3) The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements); | Rule 335-3-16-.07(e) |

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| (4) Whether compliance has been continuous or intermittent;<br><br>(5) Such other facts as the Department may require to determine the compliance status of the source;<br><br>(b) The compliance certification shall be submitted to:<br><br>Alabama Department of Environmental Management<br>Air Division<br>P.O. Box 301463<br>Montgomery, AL 36130-1463<br><br>and to:<br><br>Air and EPCRA Enforcement Branch<br>EPA Region IV<br>61 Forsyth Street, SW<br>Atlanta, GA 30303 | |
| **13. <u>Reopening for Cause</u>**<br><br>Under any of the following circumstances, this permit will be reopened prior to the expiration of the permit:<br><br>(a) Additional applicable requirements under the Clean Air Act of 1990 become applicable to the permittee with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire.<br><br>(b) Additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into this permit.<br><br>(c) The Department or EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.<br><br>(d) The Administrator or the Department determines that this permit must be revised or revoked to assure | Rule 335-3-16-.13(5) |

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| compliance with the applicable requirements. | |
| **14. Additional Rules and Regulations** | |
| This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules. | §22-28-16(d), Code of Alabama 1975, as amended |
| **15. Equipment Maintenance or Breakdown** | |
| (a) In the case of shutdown of air pollution control equipment (which operates pursuant to any permit issued by the Director) for necessary scheduled maintenance, the intent to shut down such equipment shall be reported to the Director at least twenty-four (24) hours prior to the planned shutdown, unless such shutdown is accompanied by the shutdown of the source which such equipment is intended to control. Such prior notice shall include, but is not limited to the following: | Rule 335-3-1-.07(1), (2) |
| (1) Identification of the specific facility to be taken out of service as well as its location and permit number; | |
| (2) The expected length of time that the air pollution control equipment will be out of service; | |
| (3) The nature and quantity of emissions of air contaminants likely to occur during the shutdown period; | |
| (4) Measures such as the use of off-shift labor and equipment that will be taken to minimize the length of the shutdown period; | |
| (5) The reasons that it would be impossible or impractical to shut down the source operation during the maintenance period. | |
| (b) In the event that there is a breakdown of equipment or upset of process in such a manner as to cause, or is expected to cause, increased emissions of air contaminants which are above an applicable standard, the person responsible for such equipment shall notify the Director within 24 hours or the next working day and provide a | |

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| statement giving all pertinent facts, including the estimated duration of the breakdown. The Director shall be notified when the breakdown has been corrected. | |
| **16. Operation of Capture and Control Devices** | |
| All air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established. | §22-28-16(d), Code of Alabama 1975, as amended |
| **17. Obnoxious Odors** | |
| This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible. | Rule 335-3-1-.08 |
| **18. Fugitive Dust** | |
| (a) Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc. | Rule 335-3-4-.02 |
| (b) Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds: | |
| (1) By the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic; | |
| (2) By reducing the speed of vehicular traffic to a point below that at which dust emissions are created; | |
| (3) By paving; | |
| (4) By the application of binders to the road surface at any time the road surface is found to allow the | |

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| creation of dust emissions;<br><br>Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization. | |
| **19. <u>Additions and Revisions</u>**<br><br>Any modifications to this source shall comply with the modification procedures in Rules 335-3-16-.13 or 335-3-16-.14. | Rule 335-3-16-.13 and .14 |
| **20. <u>Recordkeeping Requirements</u>**<br><br>(a) Records of required monitoring information of the source shall include the following:<br><br>(1) The date, place, and time of all sampling or measurements;<br><br>(2) The date analyses were performed;<br><br>(3) The company or entity that performed the analyses;<br><br>(4) The analytical techniques or methods used;<br><br>(5) The results of all analyses; and<br><br>(6) The operating conditions that existed at the time of sampling or measurement.<br><br>(b) Retention of records of all required monitoring data and support information of the source for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation and copies of all reports required by the permit. | Rule 335-3-16-.05(c)2. |

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| **21. Reporting Requirements** | |
| (a) Reports to the Department of any required monitoring shall be submitted at least every 6 months. All instances of deviations from permit requirements must be clearly identified in said reports. All required reports must be certified by a responsible official consistent with Rule 335-3-16-.04(9). | Rule 335-3-16-.05(c)3. |
| (b) Deviations from permit requirements shall be reported within 48 hours or 2 working days of such deviations, including those attributable to upset conditions as defined in the permit. The report will include the probable cause of said deviations, and any corrective actions or preventive measures that were taken. | |
| **22. Emission Testing Requirements** | |
| Each point of emission which requires testing will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised. | Rule 335-3-1-.05(3) and Rule 335-3-1-.04(1) |
| The Air Division must be notified in writing at least 10 days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations. | |
| To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter: | |
| (1) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests. | Rule 335-3-1-.04 |
| (2) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedures require probe cleaning). | |
| (3) A description of the process(es) to be tested including the feed rate, any operating parameters used to control | |

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| or influence the operations, and the rated capacity.<br><br>(4) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.<br><br>A pretest meeting may be held at the request of the source owner or the Air Division. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.<br><br>All test reports must be submitted to the Air Division within 30 days of the actual completion of the test unless an extension of time is specifically approved by the Air Division. | Rule 335-3-1-.04 |
| **23. <u>Payment of Emission Fees</u>**<br><br>Annual emission fees shall be remitted each year according to the fee schedule in ADEM Admin. Code R. 335-1-7-.04. | Rule 335-1-7-.04 |
| **24. <u>Other Reporting and Testing Requirements</u>**<br><br>Submission of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require emission testing at any time. | Rule 335-3-1-.04(1) |
| **25. <u>Title VI Requirements (Refrigerants)</u>**<br><br>Any facility having appliances or refrigeration equipment, including air conditioning equipment, which use Class I or Class II ozone-depleting substances as listed in 40 CFR Part 82, Subpart A, Appendices A and B, shall service, repair, and maintain such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part 82, Subpart F.<br><br>No person shall knowingly vent or otherwise release any Class I or Class II substance into the environment during the repair, servicing, maintenance, or disposal of any device except as provided in 40 CFR Part 82, Subpart F.<br><br>The responsible official shall comply with all reporting and recordkeeping requirements of 40 CFR 82.166. Reports shall be submitted to the US EPA and the Department as required. | 40 CFR Part 82 |

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| **26. Chemical Accidental Prevention Provisions** | |
| If a chemical listed in Table 1 of 40 CFR Part 68.130 is present in a process in quantities greater than the threshold quantity listed in Table 1, then:<br><br>(a) The owner or operator shall comply with the provisions in 40 CFR Part 68.<br><br>(b) The owner or operator shall submit one of the following:<br><br>(1) A compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR Part 68 § 68.10(a) or,<br><br>(2) A certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of the Risk Management Plan. | 40 CFR Part 68 |
| **27. Display of Permit** | |
| This permit shall be kept under file or on display at all times at the site where the facility for which the permit is issued is located and will be made readily available for inspection by any or all persons who may request to see it. | Rule 335-3-14-.01(1)(d) |
| **28. Circumvention** | |
| No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes any emission of air contaminant which would otherwise violate the Division 3 rules and regulations. | Rule 335-3-1-.10 |
| **29. Visible Emissions** | |
| Unless otherwise specified in the Unit Specific provisos of this permit, any source of particulate emissions shall not discharge more than one 6-minute average opacity greater than 20% in any 60-minute period. At no time shall any source discharge a 6-minute average opacity of particulate emissions greater than 40%. Opacity will be determined by 40 CFR Part 60, Appendix A, Method 9, unless otherwise specified in the Unit Specific provisos of this permit. | Rule 335-3-4-.01(1) |

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| **30. Fuel-Burning Equipment** | |
| (a) Unless otherwise specified in the Unit Specific provisos of this permit, no fuel-burning equipment may discharge particulate emissions in excess of the emissions specified in Part 335-3-4-.03. | Rule 335-3-4-.03 |
| (b) Unless otherwise specified in the Unit Specific provisos of this permit, no fuel-burning equipment may discharge sulfur dioxide emissions in excess of the emissions specified in Part 335-3-5-.01. | Rule 335-3-5-.01 |
| **31. Process Industries – General** | |
| Unless otherwise specified in the Unit Specific provisos of this permit, no process may discharge particulate emissions in excess of the emissions specified in Part 335-3-4-.04. | Rule 335-3-4-.04 |
| **32. Averaging Time for Emission Limits** | |
| Unless otherwise specified in the permit, the averaging time for the emission limits listed in this permit shall be the nominal time required by the specific test method. | Rule 335-3-1-.05 |
| **33. Compliance Assurance Monitoring (CAM)** | |
| Conditions (a) through (d) that follow are general conditions applicable to emissions units that are subject to the CAM requirements. Specific requirements related to each emissions unit are contained in the unit specific provisos and the attached CAM appendices. | |
| (a) Operation of Approved Monitoring | 40 CFR 64.7 |
| (1) Commencement of operation. The owner or operator shall conduct the monitoring required under this section and detailed in the unit specific provisos and CAM appendix of this permit (if required) upon issuance of the permit, or by such later date specified in the permit pursuant to §64.6(d). | |
| (2) Proper maintenance. At all times, the owner or operator shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment. | |
| (3) Continued operation. Except for, as applicable, monitoring malfunctions, associated repairs, and | |

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| required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.<br><br>(4) Response to excursions or exceedances. (a) Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable. (b) Determination of whether the owner or operator has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and | |

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| maintenance procedures and records, and inspection of the control device, associated capture system, and the process.<br><br>(5) Documentation of need for improved monitoring. After approval of monitoring under this part, if the owner or operator identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the owner or operator shall promptly notify the Department and, if necessary, submit a proposed modification to the permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. | |
| (b) Quality Improvement Plan (QIP) Requirements<br><br>(1) Based on the results of a determination made under Section 33(a)(4)(b) above, the Administrator or the permitting authority may require the owner or operator to develop and implement a QIP. Consistent with 40 CFR §64.6(c)(3), the permit may specify an appropriate threshold, such as an accumulation of exceedances or excursions exceeding 5 percent duration of a pollutant-specific emissions unit's operating time for a reporting period, for requiring the implementation of a QIP. The threshold may be set at a higher or lower percent or may rely on other criteria for purposes of indicating whether a pollutant-specific emissions unit is being maintained and operated in a manner consistent with good air pollution control practices.<br><br>(2) Elements of a QIP:<br><br>A. The owner or operator shall maintain a written QIP, if required, and have it available for inspection.<br><br>B. The plan initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, | 40 CFR 64.8 |

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| the owner or operator shall modify the plan to include procedures for conducting one or more of the following actions, as appropriate:<br><br>(i) Improved preventive maintenance practices.<br><br>(ii) Process operation changes.<br><br>(iii) Appropriate improvements to control methods.<br><br>(iv) Other steps appropriate to correct control performance.<br><br>(v) More frequent or improved monitoring (only in conjunction with one or more steps under paragraphs (2)(b)(i) through (iv) above).<br><br>(3) If a QIP is required, the owner or operator shall develop and implement a QIP as expeditiously as practicable and shall notify the Department if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.<br><br>(4) Following implementation of a QIP, upon any subsequent determination pursuant to Section 33(a)(4)(b) above, the Department may require that an owner or operator make reasonable changes to the QIP if the QIP is found to have:<br><br>A. Failed to address the cause of the control device performance problems; or<br><br>B. Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.<br><br>(5) Implementation of a QIP shall not excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act. | |

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| (c) Reporting and Recordkeeping Requirements | 40 CFR 64.9 |
| (1) General reporting requirements | |
| A. On and after the date specified in Section 33(a)(1) above by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with ADEM Admin. Code R. 335-3-16-.05(c)3. | |
| B. A report for monitoring under this part shall include, at a minimum, the information required under ADEM Admin. Code R. 335-3-16-.05(c)3. and the following information, as applicable: | |
| (i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken; | |
| (ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and | |
| (iii) A description of the actions taken to implement a QIP during the reporting period as specified in Section 33(b) above. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring. | |
| (2) General recordkeeping requirements. | |
| A. The owner or operator shall comply with the recordkeeping requirements specified in ADEM Admin. Code R. 335-3-16-.05(c)2.. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to Section 33(b) above and any activities undertaken to implement a quality improvement plan, and other supporting information required to | |

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| be maintained under this part (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).<br><br>B. Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. | |
| (d) Savings Provisions | 40 CFR 64.10 |
| (1) Nothing in this part shall:<br><br>A. Excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act. The requirements of this part shall not be used to justify the approval of monitoring less stringent than the monitoring which is required under separate legal authority and are not intended to establish minimum requirements for the purpose of determining the monitoring to be imposed under separate authority under the Act, including monitoring in permits issued pursuant to title I of the Act. The purpose of this part is to require, as part of the issuance of a permit under title V of the Act, improved or new monitoring at those emissions units where monitoring requirements do not exist or are inadequate to meet the requirements of this part.<br><br>B. Restrict or abrogate the authority of the Department to impose additional or more stringent monitoring, recordkeeping, testing, or reporting requirements on any owner or operator of a source under any provision of the Act, including but not limited to sections 114(a)(1) and 504(b), or state law, as applicable.<br><br>C. Restrict or abrogate the authority of the Department to take any enforcement action under the Act for | |

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| any violation of an applicable requirement or of any person to take action under section 304 of the Act. | |

# Summary Page for Gallagher 16-3 O&G Production Facility

**Permitted Operating Schedule**: **24** Hours/Day x **365** Days/Year = **8760** Hours/Year

**Emission Limitations:**

| Emission Point # | Description | Pollutant | Emission Limit | Regulation |
|---|---|---|---|---|
| **(FLARE)** | **Process Flare** | | | |
| | | Opacity | No more than one 6 min avg. > 20% and | Rule 335-3-4-.01(1)(a) |
| | | | No 6 min avg. > 40% | Rule 335-3-4-.01(1)(b) |
| | | $H_2S$ | Burning of gas stream | Rule 335-3-5-.03(2) |
| | | $H_2S$ | < 20 ppbv of $H_2S$ off site | Rule 335-3-5-.03(2) |
| | | $SO_2$ | ≤56 lb/hr | Anti-PSD limit<br>Rule 335-3-14-.04(2)(a)(1)(i)<br>Rule 335-3-5-.03(3) |

**Storage Tanks:**

(Tank-01) 16,800 Gallon Saltwater Vertical Fixed Roof Tank (VFRT)
(Tank-02) 16,800 Gallon Saltwater VFRT
(Tank-03) 16,800 Gallon Crude Oil VFRT
(Tank-04) 16,800 Gallon Crude Oil VFRT
(Tank-05) 16,800 Gallon Crude Oil VFRT
(Tank-06) 21,000 Gallon Crude Oil VFRT
(Tank-07) 8,820 Gallon Freshwater VFRT
(Tank-08) 300 Gallon Methanol Horizontal Fixed Roof Tank (HFRT)
(Tank-09) 300 Gallon Methanol HFRT
(Tank-10) 300 Gallon Methanol HFRT

# Provisos for Gallagher 16-3 O&G Production Facility

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| *Applicability* | |
| 1. The process flare shall be subject to the requirements of Rule 335-3-4-.01, "*Visible Emissions*", as specified in the Alabama Department of Environmental Management Administrative Code and in this subpart of this permit. | Rule 335-3-4-.01(1) |
| 2. The process flare shall be subject to the requirements of Rule 335-3-5-.03, "*Petroleum Production*" , as specified in the Alabama Department of Environmental Management Administrative Code and in this subpart of this permit. | Rule 335-3-5-.03 |
| 3. The facility has requested limits on the process flare to become a synthetic minor source with respect to the requirements of Rule 335-3-14-.04, "*Prevention of Significant Deterioration Permitting (PSD)*", specified in the Alabama Department of Environmental Management Administrative Code and in this subpart of this permit. | Rule 335-3-14-.04(2)(a)(1)(i) |
| 4. The process flare shall be subject to the requirements of Rule 335-3-16, "*Major Source Operating Permits*" as specified in the Alabama Department of Environmental Management Administrative Code and in this subpart of this permit. | Rule 335-3-16-.03 |
| 5. The process flare shall be subject to the requirements specified in 40 CFR Part 64, "*Compliance Assurance Monitoring*" as indicated in proviso 33 of the *General Permit Provisos* subpart and in this subpart of this permit. | 40 CFR Part 64 |
| *Emission Standards* | |
| 1. Visible emission from the process flare shall meet the requirements specified in provisos 1(a) and (b) of this section of this subpart. | |
| (a) Except for one 6-minute period during any 60-minute period, the flare shall not discharge into the atmosphere particulate that results in an opacity greater than 20%, as determined by a 6-minute average. | Rule 335-3-4-.01(1) |
| (b) At no time shall the flare discharge into the atmosphere particulate that results in an opacity greater than 40%, as determined by a 6-minute average. | Rule 335-3-4-.01(1) |

# Provisos for Gallagher 16-3 O&G Production Facility

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| 2. Except as is provided for in proviso 2(a) of this section of this subpart, each process gas stream containing more than 0.10 of a grain of hydrogen sulfide per Scf shall not be emitted into the atmosphere unless it is properly burned to maintain the ground level concentrations of hydrogen sulfide to less than twenty (20) parts per billion beyond plant property limits, averaged over a thirty (30) minute period.<br><br>(a) Provided vessels or equipment are being de-pressured and/or emptied and the reduced pressure will not allow flow of the process gas stream to the combustion device, the venting to the atmosphere of any gas stream shall be allowed, but the duration of the venting shall not exceed 15 continuous minutes. | Rule 335-3-5-.03(2) |
| 3. The allowable $SO_2$ emissions shall be less than or equal to a monthly average of 56 lb/hr to maintain emissions below the PSD threshold. | Anti-PSD<br>Rule 335-3-14-.04(2)(a)(1)(i) |
| *Compliance and Performance Test Methods and Procedures* | Rule 335-3-16-.05(c)(1)(i) |
| 1. Compliance with the visible emission standards shall be met by conducting a daily visual inspection of the flare for visible emissions. Provided that visible emissions are observed in excess of the opacity emission standards during the visual inspection, a visible emissions observation shall be conducted on the process flare according to the methods specified in *Appendix B* of this permit. | |
| 2. Each sour gas stream that can be sent to the process flare shall be tested in accordance to the requirements specified in proviso 2(a) through (d) of this section of this subpart.<br><br>(a) The hydrogen sulfide ($H_2S$) content of each sour gas stream shall be determined in accordance to the requirements specified in proviso 2(a)(1) and (2) of this section of this subpart.<br><br>(1) Testing shall consist of capturing one representative sample of the stream at a frequency of no less than once each month. | |

# Provisos for Gallagher 16-3 O&G Production Facility

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| (2) The sample collected shall be analyzed utilizing the Tutwiler procedures found in 40 CFR §60.648 or the chromatographic analysis procedures found in ASTM E-260 or the stain tube procedures found in GPA 2377-86 or those provided by the stain tube manufacture.<br>[SG $H_2S$ Content (Mole %) ] | |
| (b) The sour gas stream shall be tested for its BTU content, molecular weight, and volatile organic compound (VOC) content in accordance to the requirements specified in proviso 2(b)(1) and (2) of this section of this subpart. | |
| (1) Testing shall consist of capturing one representative sample of the SG stream at a frequency of no less than once every six (6) months. | |
| (2) Each sample shall be analyzed by utilizing the chromatographic analysis procedures in 40 CFR Part 60, Appendix A, Method 18 or equivalent methods and procedures.<br>[SG VOC Content (VOC Mol%)]<br>[SG Molecular Weight (Mol Wt.)<br>[ SG Btu Content (BTU/Scf)] | |
| (c) Provided multiple process streams can be sent to the flare and it is possible to capture a common stream whose contents would be representative of all the streams, that common stream may be used instead of the individual process streams. | |
| (d) The frequency of this testing may be modified upon receipt of Department approval. | |
| *Emission Monitoring* | Rule 335-3-16-.05(c)(1) |
| 1. Periodic Monitoring and Compliance Assurance Monitoring (CAM) for the process flare shall be conducted as specified in *Appendix A* of this permit. | 40 CFR §64.6(b) & (c) |

# Provisos for Gallagher 16-3 O&G Production Facility

| Federally Enforceable Provisos | Regulations |
|---|---|
| 2. Except during times that the production facility is not manned by operation personnel or when a process stream is not being sent to the process flare, opacity monitoring for the process flare shall be conducted as specified in Appendix B of this permit. | Rule 335-3-4-.01(2) |
| *Record Keeping and Reporting Requirements* | Rule 335-3-16-.05(c)(2) |
| 1. A record of the information specified in provisos 1(a) through (p) of this section of this subpart shall be maintained and made available for inspection. | |
| (a) The date, starting time and duration of each deviation from the requirements specified in this subpart along with the cause and corrective actions taken. | |
| (b) Record of the daily visual inspection of the flare for visible emissions | |
| (c) Results of each occurrence when a visible emission observation of the process flare was performed | |
| (d) Provided a continuous sparking flame igniter or continuous pilot burning light is not used, a record of the daily visual inspections of the flare for the presence of a spark or flame at the flare tip shall be maintained | |
| (e) $H_2S$ Content of Sour Gas (SG) Stream<br>[SG $H_2S$ Content (Mole %)] | |
| (f) Volume of SG sent to Process Flare<br>[ SG Volume Burned (MScf/Month) ] | |
| (g) SG Btu Content=<br>[SG Btu Content (BTU/Scf)] | |
| (h) SG Stream (MMBtu/Month)=<br>[SG Volume Burned (Mscf/Month)] X SG Btu Content (BTU/Scf)] X [$10^3$ Scf/Mscf] X [1 MMBtu/$10^6$ Btu] | |

## Provisos for Gallagher 16-3 O&G Production Facility

| Federally Enforceable Provisos | Regulations |
|---|---|
| (i) Flare Operating Hours =<br><br>[ Flare Op Hours (Hours/Month) ]<br><br>(j) SG $H_2S$ Feedrate to Flare (Lbs/Month)=<br><br>[ SG Volume Burned (MScf/Month) ] X [$10^3$ Scf/MScf) ] X [ 1 Mole/380 SCF ] X [ {SG $H_2S$ Content (Mole %)}/{100} ] X [ 34 Lbs. $H_2S$/Mole $H_2S$ ]<br><br>(k) SG $H_2S$ Feedrate to Flare (Lbs/hr)=<br><br>$\frac{[\text{SG } H_2S \text{ Feedrate to Flare (Lbs/Month)}]}{[\text{ Flare Op Hours (Hr/Month) }]}$<br><br>(l) Flare $SO_2$ Emissions (Lbs/Month) =<br><br>[1.689 Lbs of $SO_2$/Mscf ] X [SG $H_2S$ Content (Mole %)] X [SG Volume Burned (Mscf/Month)]<br><br>(m) Flare $SO_2$ Emissions (Lbs/hr) =<br><br>$\frac{\text{Flare } SO_2 \text{ Emissions (Lbs/Month)}}{[\text{ Flare Op Hours (Hr/Month) }]}$<br><br>(n) Flare $SO_2$ Emissions (Tons/Month)=<br><br>$SO_2$ Emissions (Lbs/Month) X [1 Ton/2,000 Lbs]<br><br>(o) Flare $SO_2$ Emissions (Tons/12 Consecutive Months)=<br><br>Σ Current Month $SO_2$ Emissions (Tons/Month) + Σ Previous 11 Months $SO_2$ emissions (Tons/Month)<br><br>(p) A record of emissions for all other regulated pollutants shall be maintained for the purpose of reporting Title V Fees. | |
| 2. Monitoring reports meeting the requirements specified in proviso 2(a) through (c) of this section of this subpart shall be submitted to the Department. | Rule 335-3-16-.05(c)(2)<br>Rule 335-3-16-.05(c)(3)(i) |

# Provisos for Gallagher 16-3 O&G Production Facility

| Federally Enforceable Provisos | Regulations |
|---|---|

(a) Each report shall identify each incidence of deviation from a permit term or condition including those that occur during startups, shutdowns, and malfunctions.

(1) A deviation shall mean any condition determined by observation, by data derived from any monitoring or testing or recordkeeping which is required by the permit that can be used to determine or indicate compliance, that identifies an affected source has failed to meet an applicable emission limit or standard or that a work practice was not complied with or completed.

(2) If no deviation event occurred during the reporting period, a statement that indicates there were no deviations from the permit requirements shall be included in the report.

(b) An Excessive Emission and CMS Performance Report and Summary Report meeting the requirements specified in provisos 2(b)(1) through (3) to this section of this subpart shall be submitted to the Department.

(1) A deviation shall consist of, but is not limited to, any period of time during which the following occurs:

(i) There was a failure to maintain the presence of a flame or igniter spark at the flare tip when a process gas stream could have been sent to it.

(2) The report shall be submitted on a quarterly calendar basis according to the following reporting schedule:

| Reporting Period | Submittal Date |
|---|---|
| *January 1st through March 31st* | *April 30* |
| *April 1st through June 30th* | *July 31st* |
| *July 1st through September 30th* | *October 31st* |
| *October 1st through December 31st* | *January 31st* |

# Provisos for Gallagher 16-3 O&G Production Facility

| Federally Enforceable Provisos | Regulations |
|---|---|

(3) Except as provided for in proviso 2(d) of this section, each report shall meet the requirements specified in §60.7(c) of 40 CFR Part 60, Subpart A.

(c) A Periodic Monitoring Report (PMR) meeting the requirements specified in provisos 2(c)(1) through (3) of this section of this subpart shall be submitted to the Department.

(1) A deviation shall consist of, but is not limited to, any period of time during which the following occurs:

(i) There was a failure to maintain the 6-minute average opacity at a value less than or equal to 20% for no more than one 6-minute period when utilizing Method 9.

(ii) There was a failure to maintain the 6-minute averaging opacity at a value less than or equal to 40% during any 6-minute period when utilizing Method 9.

(iii) There was a failure to keep offsite hydrogen sulfide concentrations average over a 30 minute period to less than 20 ppmv as determined by air quality modeling study.

(iv) There was a failure to keep the period in which a process gas steam was vented into the atmosphere to less than or equal to 15 consecutive minutes in duration.

(v) There was a failure to maintain the $SO_2$ emissions below the permitted limit.

# Provisos for Gallagher 16-3 O&G Production Facility

| Federally Enforceable Provisos | Regulations |
|---|---|

(vi) There was a failure to meet the requirements specified in the *Compliance and Performance Test Methods and Procedures* section of this subpart.

(vii) There was a failure to meet the requirements specified in the *Emission Monitoring* section of this subpart.

(viii) There was a failure to meet the requirements specified in the *Recordkeeping and Reporting Requirements* section of this subpart.

(2) Except as provided for in proviso 2(d) of this section, the report shall meet the requirements specified in proviso 2(c)(2)(i).

(i) For each deviation event, the following information shall be submitted.

(I) *Emission source description*

(II) *Permit requirement*

(III) *Date*

(IV) *Starting time*

(V) *Duration*

(VI) *Actual quantity of pollutant or parameter*

(VII) *Cause*

(VIII) *Actions taken to return to normal operating conditions*

(IX) *Total operating hours of the affected source during the reporting period*

(X) *Total hours of deviation events during the reporting period*

# Provisos for Gallagher 16-3 O&G Production Facility

| Federally Enforceable Provisos | Regulations |
|---|---|
| (XI) *Total hours of deviation events that occurred during start ups, shut downs, and malfunctions during the reporting period* | |
| (3) The report shall be submitted semi-annually on a calendar basis according to the following reporting schedule:<br><br>Reporting Period — Submittal Date<br>*January 1st through June 30th* — *July 31st*<br>*July 1st through December 31st* — *January 31st* | |
| (d) The report content and format in proviso 2(b) and (c) of this section may be modified upon receipt of Departmental approval. | |
| 3. Each deviation from the requirements specified in this subpart, including those that occur during startups, shutdowns, and malfunctions, shall be reported to the Department in a manner that complies with proviso 15(b) and 21(b) of the general proviso subpart of this permit. | Rule 335-3-16-.05(c)(2)<br>Rule 335-3-16-.05(c)(3)(ii) |

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## Appendix A: Process Flare Monitoring

## *Monitoring for Process Flare*

| **Monitoring approach:** | *Periodic Monitoring* | *Compliance Assurance Monitoring* |
|---|---|---|
| **I. Indicator** | **$H_2S$ feed rate to Flare** | **Operate flare with a flame or spark present at all times when a process gas stream may be sent to it.** |
| A. Measurement approach | Inlet feed volume shall be monitored with a system capable of measuring and recording the flow rate and/or the parameters utilized for flow rate calculation or estimated utilizing material balances, computer simulations, special testing and etc | The flare tip shall be equipped either with a continuous sparking flame igniter that is monitored by an amp meter or an equivalent device or visual inspection<br>OR<br>with a continuously burning pilot light that is monitored with either a thermocouple or an equivalent device or by visual inspection. |
| **II. Indicator range** | **$H_2S$ feed rate of less than or equal to 500 Lbs/Hr** | **Presence of a flame or spark at flare tip** |
| | A deviation is defined as anytime the daily $H_2S$ feed rate is greater than 500 Lbs/Hr | A deviation is defined as when there was no spark or flame present at the flare tip when a process gas stream could be vented to it. |
| | A deviation triggers an immediate inspection, corrective action, and reporting within 48 hours or two work days | A deviation triggers an immediate inspection and corrective actions that meet the requirements of 40 CFR Part 64.7(d) and reporting within 48 hours or two work days. |
| A. QIP threshold | Not applicable | If the accumulated hours of deviation events occurring exceed 5% of the flare operating time during any quarterly reporting period, a Quality Improvement Plan (QIP) shall be developed and implemented. |
| **III. Performance criteria** | | |
| A. Data representiveness | Each volume monitor shall be located upstream of the process flare and shall consist of a single device that monitors all streams or multiple devices that monitor individual or multiple stream.<br>The volume sensor shall be accurate to within 2% of span or 5% of design flow rate | Each flame igniter or flame monitor shall be located at the flare tip and focused on the area where gas exits the flare tip.<br>Visual observations shall be made from the location that provides the best view of the flare tip and/or flare pilot lights or flare igniter. |
| | The sample point for $H_2S$ content shall be located downstream of where the various gas processing streams combine prior to entry into the process flare and thermal oxidizer | |
| B. Verification of operational status | Not applicable | Not applicable |

## *Monitoring for Facility Flares - Continued*

| **Monitoring approach:** | *Periodic Monitoring* | *Compliance Assurance Monitoring* |
|---|---|---|
| | **$H_2S$ feed rate to Flare** | **Operate flare with a flame or spark present at all times when a process gas stream may be sent to it.** |
| C. QA/QC practices & criteria | Each volume monitor shall be calibrated at a frequency in accordance with the manufacturer's specifications, other written procedures that provide adequate assurance that the device is calibrated accurately, or at least annually whichever is more frequent. | Each flame igniter or flame monitor shall be maintained and calibrated in accordance with the manufacturer's specifications, other written procedures that provide adequate assurance that the device is properly maintained and calibrated accurately or at least annually whichever is more frequent. |
| | If the monitor fails its calibration tests, the monitor shall be taken out of service until repairs and/or replacements are made and a new calibration test is undertaken and passed | Repairs and/or replacements shall be made immediately when non functioning or damaged parts are found. |
| | | Flame igniter arc length shall not exceed 10% of arc interval and shall have an arcing frequency of no greater than once every 3 seconds. |
| D. Monitoring frequency | Inlet volume measured continuously | Pilot flame shall be monitored either continuously with a thermocouple or daily with visual inspections if operating staff is on site. |
| | | Flame igniter - arcing frequency shall be monitored either continuous with an amp meter or daily with visual inspections if operating staff is on site. |
| Data collection procedure | Calculate &/or record an inlet volume that is representative of the average daily volume entering the process flare | Record time, date and duration of each incident of when no spark or flame was present at the flare tip when a process gas stream could have been sent to it. |
| | Record daily hours of operation for the process flare | Record time, date and results of each visual inspection when required |
| | Record each $H_2S$ concentration analysis | Record time, date and results of each calibration |
| | Calculate & record $H_2S$ and $SO_2$ emissions monthly | Record time, date and results of each inspection and corrective actions taken |
| | Record calibration results | |
| | Record inspection results, corrective and actions taken | |
| Averaging period | | Instantaneous |

## Appendix B: Opacity Monitoring for Facility Process Flare

## *Opacity Monitoring for Facility Process Flare*

| **Monitoring approach:** | *Periodic Monitoring* |
|---|---|
| **I. Indicator** | **Opacity** |
| A. Measurement approach | A daily visual inspection of the flare for visible emissions shall be performed. The following requirement shall be meet:<br>• Visual inspections must be conducted for a duration of at least 6 minutes during daylight hours, except as specified below<br>o A daily visual inspection of the flare is not required during periods that the production facility is unmanned by plant personnel or when a process stream is not being sent to the flare<br>• If visible emissions, in excess of the opacity standards, are observed during the daily visual inspection of the flare, a visible emissions observation (veo) shall be performed that meets the following requirements:<br>o Duration of each veo shall be:<br>>= 15 minutes<br>AND<br><= 60 minutes<br>o Each VEO shall be conducted in accordance to either:<br>Test Method 9 of 40 CFR Part 60<br>OR<br>Test Method 22 of 40 CFR Part 60<br>➢ Method 9 shall only be performed by an individual certified in using that method |
| **II. Indicator range** | **2nd 6-min. opacity average > 20%**<br>**Each 6-min. opacity average >40%**<br>**OR**<br>**>12 minutes of visible emissions during observation**<br>A deviation is defined as anytime the observed 6-minute average opacity exceeds 20% for the 2nd time when utilizing Method 9.<br>A deviation is defined as anytime the observed 6-minute average opacity exceeds 40% for the 1st time when utilizing Method 9.<br>A deviation is defined as anytime the accumulated time in which visible emissions were observed that exceeds 12 minutes per observation when utilizing Method 22.<br>A deviation triggers continued visible emissions observations at a frequency suitable to defining the duration of the visible emission deviation event. One observation shall be undertaken to establish the end of the visible emission deviation event.<br>A deviation triggers an immediate inspection, corrective action, and reporting within 48 hours or two work days. |

## *Opacity Monitoring for Facility Process Flare*

| **Monitoring approach:** | *Periodic Monitoring* |
|---|---|
| **II. Performance criteria** | |
| A. Monitoring frequency | Daily visual inspection of the flare; Each occurrence of VEO |
| Data collection procedure | Record: Time, date, and duration of each daily visual inspection<br><br>Record: Each occurrence when a veo was performed<br>Each 15 second observation reading<br><br>Record: Time, date and results of corrective actions taken |
| Averaging period | Six minute |